

Application No.: 10/811,423  
Response dated: September 11, 2007  
Reply to Office Action dated: May 11, 2007

**Amendments to the Claims:**

This listing of claims will replace all prior versions, and listings, of claims in the application.

**Listing of Claims:**

1. (withdrawn) A method for culturing human embryonic stem cells comprising culturing the stem cells in a nutrient medium in which the stem cells will remain undifferentiated and in an atmosphere having no more than about 5% oxygen.
2. (withdrawn) The method of claim 1 wherein the medium further comprises an antioxidant in the nutrient medium.
3. (withdrawn) An improvement in methods for cloning cultures of human embryonic stem cells, the improvement comprising culturing the human embryonic stem cells prior to cloning in a nutrient medium and in an atmosphere having no more than about 5% oxygen.
4. (withdrawn) The improvement of claim 3 further comprising adding an antioxidant to the nutrient medium in which the stem cells are cultured.
5. (withdrawn) A method for culturing human embryonic stem cells comprising culturing the stem cells in a nutrient medium in which the stem cells can remain undifferentiated and in an atmosphere having no more than about 5% oxygen.
6. (withdrawn) An improvement in a medium for the cultivation of human embryonic stem cells, the improvement comprising that the medium is adjusted to have an osmolarity in excess of 330 mOsMol.
7. (withdrawn) The improvement as claimed in claim 6 wherein the osmolarity of the medium is about 350 mOsMol.

8. (currently amended) A stem cell culture comprising  
a culture plate;  
a nutrient medium in the culture plate, said medium having an osmolarity in  
excess of 330 mOsMol; and  
undifferentiated human embryonic stem cells, wherein the cells are cultured in the  
medium, wherein the osmolarity in the medium is optimized to support undifferentiated growth  
of the cells.

9. (original) A stem cell culture as claimed in claim 8 wherein the osmolarity is  
about 350 mOsMol.

10. (withdrawn) A method for culturing human embryonic stem cells comprising  
culturing the stem cells in a nutrient medium in which the stem cells will remain  
undifferentiated, the medium having an osmolarity in excess of 330 mOsMol.

11. (withdrawn) A method as claimed in claim 10 wherein the medium has an  
osmolarity of about 350mOsMol.

12. (previously presented) The culture of Claim 8 wherein the cells remain  
undifferentiated.

13. (new) A stem cell culture comprising  
a culture plate;  
a nutrient medium in the culture plate, said medium having an osmolarity in the  
range of 330 mOsMol to about 350 mOsMol, wherein the quality index of the medium (MQI) is  
optimal when osmolarity is in excess of 330 mOsMol; and  
undifferentiated human stem cells defined by expression of Oct4 marker in the  
medium, wherein the osmolarity in the medium is optimized to support undifferentiated growth  
of the cells.

Application No.: 10/811,423  
Response dated: September 11, 2007  
Reply to Office Action dated: May 11, 2007

14. (new) A stem cell culture as claimed in claim 13 wherein the osmolarity is about 350 mOsMol.